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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,479	10/01/2003	Wan Hyuk Yoon	1508.1021	4675

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WASHINGTON, DC 20005

EXAMINER
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DESAI, ANISH P

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/674,479	<b>Applicant(s)</b> YOON, WAN HYUK	
	<b>Examiner</b> Anish Desai	<b>Art Unit</b> 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

*h*

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I (Claims 1-27) in the reply filed on 08/16/05 is acknowledged. The traversal is on the ground(s) that there have been no references cited to show any necessity requiring restriction and the examiner has not clearly set forth why there would be a serious burden if restriction is required. In response to applicant's argument, the examiner wishes to direct applicant's attention to the office action dated 07/25/05 in which the examiner has given reasons for the making election/restriction requirement (please see Paragraphs 2 and 3 of the office action dated 07/25/05). In response to the applicant's argument that there have been no references cited to show any necessity for requiring the election/restriction, the examiner wishes to direct the applicant's attention to MPEP § 803 (see section titled "GUIDELINES"). The MPEP § 803 states that the references are not needed in making the requirement for election restriction.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 2, 20, and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 2 recite "inner surface of the

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thermoforming layer", it is unclear as to what applicant means by the inner surface. For the purpose of the examination, the examiner is interpreting "inner surface of the thermoforming layer" as the surface of the thermoforming layer that will face the contents of the vacuum packaging bag when a vacuum packaging bag is formed using the claimed film. Additionally, claims 2,20, and 23 recite "different angles", it is unclear as to what applicant means by "different angles".

3. Claims 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 10 recites "first group of protuberances each are 0.8-1.5 times thicker than a thickness of thermoforming layer". It is unclear as to if the thickness of the protuberances is 0.8 times the thickness of the thermoforming layer then the said protuberances will be thicker than the thickness of the thermoforming layer. Shouldn't the protuberances with thickness of 0.8 times the thickness of thermoforming layer be thinner than the thermoforming layer?

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-9, and 12-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristen (US Patent 4,756, 422) in view of Shepherd (US Patent 5,129, 813).

5. Kristen teaches a plastic bag for vacuum packaging (see Title). The sides of the bag 10 are made of at least two layers. An inner layer 16 formed from a heat sealable thermoplastic material. An outer layer 18 is formed from a gas-impermeable material to provide a barrier against the influx of air to the interior of the bag 10 after it has been sealed. The inner layer 16 includes a pattern of intersecting channels 20 formed on at least one of its facing inner surfaces (Column 1, lines 44-53). Thus, a pattern of intersecting channels can be formed on the outer surface of the inner layer 16.

6. Note that the inner layer 16 is embossed with rectangular patterns 24 (Column 3, lines 15-19). The examiner is equating the rectangular patterns as the claimed protuberances, the inner layer as the claimed thermoforming layer, and the outer layer as the claimed base layer. Moreover, Kristen teaches that the inner layer and the outer layer can be joined together over their entire adjacent surfaces such that no air pockets exists between the inner layer and the outer layer (Column 2, lines 66-68). With respect to claim 12, although Kristen does not explicitly teach adhesive layer, it is obvious that a skilled artisan can use adhesive to bond two layers together motivated by the desire to remove any air pockets that can be created between the two layers.

7. With respect to claims 13-15, Kristen teaches that outer layer can be made of polyester or polyamide (Column 3, line 47-49) which meets the claim limitations of claim 13, a bag can include intermediate layers between inner layer and outer layer (Column

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4, lines 47-49) which meets the claim limitation of claim 14 where the intermediate layers and an outer layer can be collectively called as the claimed base layer with a multilayered structure, and the inner layer is made of polyethylene (Column 4, lines 43-44) which meets the claim limitations of claim 15. Additionally, in Figure 2 of Kristen's disclosure, it seems that the inner layer is not embossed in the areas where the air channels are formed which meets the claim limitation of claim 16.

8. Kristen is silent with respect to teaching first group and second group of protuberances as claimed in claims 1 and 17, third group of protuberances having a height higher than that of the second group of protuberances as claimed in the claim 18, fourth group of protuberances having a height higher than that of the third group of protuberances as claimed in the claim 19, first group and second group of protuberances having various sizes as claimed in the claim 3, first, second and third group of protuberances having various sizes as claimed in the claim 21, first group, second group, third group and fourth group of protuberances having various sizes as claimed in the claim 24, first group and second group of protuberances with different shapes as claimed in the claim 4, first group, second group and the third group of protuberances having different shapes as claimed in the claim 18, first group, second group, third group, and fourth group of protuberances having different shapes as claimed in the claim 25, pattern comprising fruit shape, animal shape, character shape, plant shape, and diagram shape as claimed in claims 5-9, and the arrangements of protuberances at different angles as claimed in claims 2 and 23. Thus, one in the possession of Kristen's invention would have to look elsewhere.

9. Shepherd teaches a vacuum bag including a non-porous material having impressed therein a three dimensional patterns defining plurality of interconnected channels (see Abstract). Figures 1 and 2 of the Shepherd show such a three-dimensional pattern. The vacuum bag of Shepherd allows the air within the bag to be quickly and easily evacuated without the formation of air pockets and wrinkles (Column 2, lines 31-32).

10. With respect to claims 1,17, 18, and 19, Figure 2 of Shepherd shows protuberances of different heights. With respect to claims 3,21 and 24, Figure 1 and Figure 2 of Shepherd show protuberances of various sizes. With respect to claims 4, 18, and 25, Figure 1 of Shepherd shows protuberances of various shapes. Note that with respect to the recitation "first group", "second group", "third group" and "fourth group", a skilled artisan can designate a group of protuberances with certain height, size and shape as "first group", "second group" etc.

11. With respect to claims 5-9, Shepherd discloses a patterned vacuum bag except for the claimed patterns. However, Shepherd teaches that any pattern that defines plurality of interconnected channels can be employed (Column 6, lines 1-5). Thus, a skilled artisan can choose any suitable pattern that he/she desires.

12. With respect to claims 2 and 23, Figure 2 of Shepherd shows protuberances at different angles.

13. With respect to claim 27, recall that Kristen teaches vacuum packaging bag. As shown in Figure 1, it seems that the bag of Kristen has an upper sheet and a lower

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sheet, the lower edges and both side edges are sealed such that there is an opening in the bag to receive the contents. The invention of Shepherd is previously disclosed.

14. The inventions of Kristen and Shepherd are analogous art as they both relate to vacuum bags.

15. Thus, a skilled artisan would have found it obvious to use vacuum bag of Shepherd with three dimensional pattern having first, second, third and fourth group of protuberances having different heights, sizes, and shapes in the invention of Kristen. One would be motivated to do this, in order to form a vacuum packaging bag which will allow air within the bag to be removed quickly and without the formation of wrinkles as taught by Shepherd.

16. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristen (US Patent 4,756, 422) in view of Shepherd (US Patent 5,129, 813) and further in view of Leonard Jr. (US Patent 4,343,848).

17. The inventions of Kristen and Shepherd are previously disclosed. Both are silent with respect to teaching claim limitations of claims 10 and 11. Leonard teaches an embossed thermoplastic film that can be used in a packaging field (Column 1, lines 13-16). According to Leonard, an advantage of the film of the present invention is that the film has an increased embossed thickness over the prior art films. The increased embossed thickness greatly improves handling of the film on processing machinery, and in particular, rolling up the film on large storage rolls (Column 2, lines 3-8).

18. The protuberances have base width  $b$  of from about 4 mils to about 10 mils (Column 2, lines 54-56). The examiner is equating the base width as the thickness of



the protuberances. The thickness of the thermoplastic film is from 0.5 mil to about 10 mils (Column 2, lines 57-60). Thus a ratio of the protuberances with a base width of 5 mil to the thermoplastic film with a thickness of 5 mil will result in the claimed limitation of claims 10 and 11.

19. Thus, a skilled artisan would have found it obvious to use the protuberances with given base width and thermoplastic film with given thickness of Leonard in the invention of Kristen motivated by the desire to easily roll up the film on storage rolls as taught by Leonard.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anish Desai whose telephone number is 571-272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

APD

*Elizabeth M. Cole*  
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PRIMARY EXAMINER